

NATIONAL WEATHER SERVICE
PRODUCT/SERVICE DESCRIPTION DOCUMENT (SDD)

TYPE: *Experimental Product*

DATE: *November 18, 2003*

**NWS Watches, Warnings and Advisories
Using RSS and CAP XML Based Formats**

Part I - Mission Connection

1. **Product Description** - Provide NWS Watches, Warnings and Advisories in three Internet based formats. Each format provides a channel for users to quickly access specific products. Products are organized by state and US territories, as well as a single file for the entire nation. Traditional html pages are provided for direct access by customers and citizens. Two data exchange formats using Extensible Markup Language (XML) are provided for customers and partners who wish to either display selected parts of the products or provide a display of the entire product.

The product homepage can be accessed at: <http://weather.gov/alerts/>

Also covered are the delivery of Tropical Prediction Center (TPC) tropical storm product headlines using the RSS format. These can be accessed at:

<http://www.nhc.noaa.gov/index-at.rss> (Atlantic and Caribbean)

<http://www.nhc.noaa.gov/index-ep.rss> (Eastern Pacific)

2. **Purpose** - To replace specific functionality available from the Interactive Weather Information Network (IWIN) website. IWIN contains webpages that list all current WebSite-Watcher Archive files (WWAs) by state. This feature has proven very popular with users, especially state emergency managers. This was the single most requested feature mentioned in comments regarding the phase out of IWIN. In addition, over the past years, NWS has received a number of requests to make NWS data available in either Really Simple Syndication (RSS) or other XML based feeds.

These Hypertext Markup Language (HTML)/RSS/ Common Alerting Protocol (CAP) files are updated roughly every minute. The TPC RSS files are updated when a TPC product package is updated.

This product is considered “experimental” by the NWS. The purpose of an experimental product is to obtain user feedback on a new product. At the end of a fixed period, an evaluation is made to determine whether the product is useful enough to users to warrant the commitment of NWS resources to provide it permanently. In order to make this

decision, user comments and input are solicited during the experimental period. This user input helps the NWS determine whether to continue the provision of the product and if so, it identifies changes that could be made to better serve user needs.

The experimental period for this prototype will be from November 24 through January 1, 2004. Because the product is experimental, NWS does not guarantee it will be continuously available throughout this period. However, every effort will be made to assure reliable provision of this service, in particular during times when storms affect the prototype area.

3. **Audience** - The intended audience is emergency managers, partners, customers and the general public. The CAP format will be of special interest to emergency managers as CAP is becoming an important method to exchange alert messages. The RSS format will be of interest to those wishing to browse NWS WWA headlines quickly, followed by reading of selected products. RSS is particularly suited for the display of the headlines on workstation desktops and non-NWS webpages.
4. **Presentation Format** - This data is presented in three formats:

HTML: Hypertext Markup Language. These files are meant to be displayed using a World Wide Web browser. There is one HTML file for each US state and territory, and one for the entire nation. Each product listed on the HTML contains a hidden "anchor" that allows hypertext links to be built that will take the user to that specific product.

CAP: Common Alerting Protocol. CAP is a XML based data format that is primarily targeted for machine to machine transfer. The CAP files contain the entire contents of the NWS WWA message. There is one CAP file for each US state and territory, and one that lists all active WWA's for the entire nation.

RSS: Sometimes referred to as Really Simple Syndication, the XML based RSS format is designed to allow syndication of news related headlines, with a hyperlink to the complete document. There is one RSS file for each US state and territory, and one that lists all active WWA's for the entire nation. Each product listed in the RSS contains a hyperlink to complete text of the product in the related HTML file listed above. These files are currently posted using RSS 2.0. Also produced are two RSS files that list current headlines for TPC storm packages.

5. **Feedback Method** - The NWS seeks to improve its services based on user feedback. A comment form is provided on the HTML/CAP/RSS webpage. Comments regarding these products can also be sent to:

National Weather Service
Attn: Robert Bunge, W/OCIO
1325 East-West Highway #13460
Silver Spring, MD 20901

Or via e-mail to: robert.bunge@noaa.gov

Or via a feedback link located at <http://www.nws.noaa.gov/alerts/>

Part II - Technical Description

1. **Format & Science Basis** - Three sets of files, one for each state and territory, containing current NWS Watch Warnings and Advisories are updated about every minute and made available for public use via a web site. For each set of files, three formats are generated:

CAP: Common Alerting Protocol. These files contain the entire NWS product. Each state file contains a separate section for each WWA currently active in that state.

Example of a single product in CAP format:

```
<cap:info>
<cap:category>Met</cap:category>
<cap:event>FLOOD WATCH</cap:event>
<cap:urgency>Unknown</cap:urgency>
<cap:severity>Unknown</cap:severity>
<cap:certainty>Unknown</cap:certainty>
<cap:effective>2003-08-15 10:56:00</cap:effective>
<cap:expires>2003-08-16 04:00:00</cap:expires>
<cap:headline>
FLOOD WATCH
</cap:headline>
<cap:description>
```

AZZ001>003-CAZ029-160400-

BULLETIN - IMMEDIATE BROADCAST REQUESTED
FLOOD WATCH
NATIONAL WEATHER SERVICE LAS VEGAS NV
355 AM PDT FRI AUG 15 2003

THE NATIONAL WEATHER SERVICE IN LAS VEGAS HAS ISSUED A FLASH FLOOD
WATCH EFFECTIVE FROM NOON UNTIL 900 PM FRIDAY EVENING FOR PEOPLE IN
THE FOLLOWING COUNTIES

IN NORTHWEST ARIZONA
MOHAVE

IN SOUTHEAST CALIFORNIA
EXTREME SOUTHEASTERN SAN BERNARDINO

A LOW PRESSURE SYSTEM MOVING FROM OLD MEXICO INTO THE DESERT
SOUTHWEST WILL COMBINE WITH A MOIST AND UNSTABLE AIR MASS OVER
NORTHWEST ARIZONA AND FAR SOUTHEAST CALIFORNIA TO PRODUCE

FAVORABLE CONDITIONS FOR HEAVY RAIN PRODUCING THUNDERSTORMS TODAY.

STORMS THAT DEVELOP THIS AFTERNOON OVER THE ARIZONA RIM COUNTRY WILL

BE STEERED SOUTHWEST TOWARD THE COLORADO RIVER. DEEP MOISTURE IN PLACE WILL ALLOW THESE STORMS TO DROP ONE TO TWO INCHES OF RAIN IN A SHORT PERIOD. IN ADDITION...REDEVELOPING THUNDERSTORMS MAY REPEATEDLY MOVE OVER THE SAME AREAS FOR INCREASED RUNOFF AND POSSIBLE FLASH FLOODING.

REMEMBER...A FLASH FLOOD WATCH MEANS THAT THERE IS A THREAT OF FLASH

FLOODING IN AND CLOSE TO THE WATCH AREA. THOSE HIKING OR CAMPING SHOULD AVOID DRY STREAM BEDS AND WASHES AND STAY AWAY FROM NARROW

CANYONS WHERE FLOOD WATERS CAN BECOME KILLERS. FLASH FLOODS CAN OCCUR

MANY MILES FROM THE PARENT THUNDERSTORMS. BE READY TO MOVE TO HIGHER

GROUND IF FLOODING IS OBSERVED OR A WARNING IS ISSUED.

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</cap:description>

<cap:web>

<http://www.nws.noaa.gov/alerts/ca.html#CAZ029X0>

</cap:web>

<cap:area>

<cap:areaDesc>San Bernardino County,Upper Colorado River Valley, California</cap:areaDesc>

<cap:geocode>006071</cap:geocode>

</cap:area>

</cap:info>

These files are currently posted using CAP 0.91a. Additional information on CAP is available from:

<http://www.incident.com/cap/index.html>

RSS: Sometimes referred to as Really Simple Syndication. These files contain only the headline of an NWS product, a hyperlink to a copy of the comment product, and a very brief description of the product. Each state file contains a separate section for each WWA currently active in that state.

Example of a single product in RSS format:

```

<item>
<title>
FLOOD WATCH - San Bernardino County,Upper Colorado River Valley, California
</title>
<link>
http://www.nws.noaa.gov/alerts/ca.html#CAZ029X0
</link>
<description>
FLOOD WATCH
Issued At: 2003-08-15 10:56:00
Expired At: 2003-08-16 04:00:00
Issuing Weather Forecast Office Website: http://www.wrh.noaa.gov/Lasvegas/
</description>
</item>

```

Example of a TPC generated RSS format:

```

<channel>
<title>National Hurricane Center (Atlantic)</title>
<link>http://www.nhc.noaa.gov</link>
<description>
Active tropical cyclones in the Atlantic, Caribbean, and the Gulf of Mexico
</description>
<copyright/>
<language>en-us</language>
<image>
<title>NOAA logo</title>
<url>http://www.nhc.noaa.gov/gifs/noaa\_small.gif</url>
<link>http://www.nhc.noaa.gov/</link>
<width>45</width>
<height>45</height>
<description>NOAA logo</description>
</image>
<lastBuildDate>Fri, 24 Oct 2003 13:33:08 +0000</lastBuildDate>
<item>
<title>
TROPICAL DEPRESSION NICHOLAS Public Advisory Number 41
</title>
<link>
http://www.nhc.noaa.gov/text/refresh/MIATCPAT4+shtml/232036.shtml?
</link>
<description>Issued 5 PM AST THU OCT 23 2003</description>
</item>

```

<item>
<title>
TROPICAL DEPRESSION NICHOLAS Public Advisory Number 41(Spanish)
</title>
<link>
<http://www.nhc.noaa.gov/text/refresh/SJUTCPSP4+shtml/232109.shtml?>
</link>
<description>Issued 5 PM AST JUEVES 23 DE OCTUBRE DE 2003</description>
</item>

<item>
<title>
TROPICAL DEPRESSION NICHOLAS Forecast/Advisory Number 41
</title>
<link>
<http://www.nhc.noaa.gov/text/refresh/MIATCMAT4+shtml/232035.shtml?>
</link>
<description>Issued 2100Z THU OCT 23 2003</description>
</item>

<item>
<title>TROPICAL DEPRESSION NICHOLAS Discussion Number 41</title>
<link>
<http://www.nhc.noaa.gov/text/refresh/MIATCDAT4+shtml/232036.shtml?>
</link>
<description>Issued 5 PM EDT THU OCT 23 2003</description>
</item>

<item>
<title>
TROPICAL DEPRESSION NICHOLAS Probabilities Number 40
</title>
<link>
<http://www.nhc.noaa.gov/text/refresh/MIASPFAT4+shtml/231433.shtml?>
</link>
<description>Issued 11 AM AST THU OCT 23 2003</description>
</item>

<item>
<title>TROPICAL DEPRESSION NICHOLAS Maps and Charts</title>
<link>
http://www.nhc.noaa.gov/refresh/graphics_astorm19+shtml/232058.shtml?
</link>
<description>Latest tropical cyclone track maps and wind charts</description>
</item>

<item>
<title>TROPICAL DEPRESSION NICHOLAS Advisory Archive</title>
<link>
<http://www.nhc.noaa.gov/archive/2003/refresh/NICHOLAS+shtml/232044.shtml?>

```
</link>
  <description>
Archive of all advisories released for this tropical cyclone
</description>
</item>
  <item>
<title>Special Tropical Disturbance Statement</title>
  <link>
http://www.nhc.noaa.gov/text/refresh/MIADSAAT+shtml/241330.shtml?
</link>
<description>Issued 930 AM EDT FRI OCT 24 2003</description>
</item>
</channel>
```

These files are currently posted using RSS 2.0. Additional information on RSS is available from:

<http://blogs.law.harvard.edu/tech/rss>

HTML: These are normal webpages:

A sample page may be viewed at: <http://weather.gov/alerts/md.html>



The screenshot shows the National Weather Service website. At the top, there is a blue header with the NOAA logo on the left, the text "National Oceanic and Atmospheric Administration" and "National Weather Service" in the center, and a "weather.gov" logo on the right. Below the header is a navigation bar with links for "Site Map", "News", "Organization", and a "Search" box. The main content area has a breadcrumb trail "Home > Alerts > Maryland". Below this, it says "Last Updated: Thu, 21 Aug 2003 15:47:59 EST". The title of the page is "Current Watches, Warnings and Advisories for Maryland Issued by the National Weather Service". A paragraph explains that the page contains watches, warnings, and advisories for Maryland, updated about once per minute, and suggests looking at RSS and CAP formats. The section is titled "SPECIAL WEATHER STATEMENT" for "Allegheny, Maryland". It includes a long alphanumeric code: "DCI001-MD002>007-009>011-013-014-016>018-VAZ021-025>031-036>042-050>057-WVZ046>055-220900-". The statement is dated "245 PM EDT THU AUG 21 2003". The text describes hot and humid weather expected to continue on Friday, with temperatures around 90 degrees and heat index values approaching 100 degrees. It mentions that relief is in sight as a cold front is expected to bring cooler and drier air for the weekend. A warning is issued for children, the elderly, and people with chronic ailments, stating that heat exhaustion, cramps, or even heat stroke can result from prolonged exposure to the heat.

2. **Product Availability** - Starting on or about November 24, 2003, information provided by this service will be updated as it becomes available. Information on normal update cycles is provided at: <http://weather.gov/alerts/>

This service is provided exclusively over the Internet (however, most of the information provided is also available from standard NWS operational sources). The NWS has no control over the reliability of the Internet. Users need to factor this uncertainty into their decision to use this service.

Because the product is experimental, the NWS does not guarantee the service will be continuously available. However, every effort will be made to assure reliable provision of this service.